

REMARKS

Applicant requests favorable reconsideration and allowance of this application in view of the foregoing amendments and the following remarks.

Claims 1, 3-8, 10-15, 17-19, 21-26, 28, 29, and 41-43 are presented for examination. Claims 1, 8, 15, 19, 26, and 41 are in independent form.

Claims 1, 8, 15, 19, 26, and 41 have been amended. Applicant submits that support for those amendments can be found in the original disclosure and, therefore, no new matter has been added.

Prior to addressing the specific outstanding rejections, Applicant believes an overview of the problem addressed by the claimed invention may be helpful. As recited in independent Claim 1, for example, the present invention is directed to an image processing apparatus for adding information to image data. In some situations, first identification information relating to copyright information, for example, may be added to image data, and second identification information that is different in form from the first identification information may also be added to the image data. The second identification information might represent, for example, a serial number of a machine used to form an image using the image data.

The first and second identification information may be added to the image data at different stages of processing the image data. For example, image data is sometimes input as three color component signals referred to as RGB signals (red, green, blue). Since it is generally desirable to add the first identification information relating to copyright information to image data in a manner that is not easily recognizable by human eyes, that information may be added to a single component (e.g., B) of the RGB signals.

On the other hand, for certain uses of the image data (e.g., printing), the image data is typically converted from RGB to so-called YMCK signals (yellow, magenta, cyan, black). Since it is also desirable to add the second identification information (e.g., a serial number) in a manner that is not easily recognizable by human eyes, that information is sometimes added to the yellow component of the YMCK signals.

A problem may arise, however, where there is a conflict between the first identification information and the second identification information. For example, the B component of RGB input signals is primarily related to the Y component of YMCK signals. If the first identification information is added to the B component of an RGB signal, when the RGB signal is converted to a YMCK signal the first identification information formed by the B signal will be formed primarily by the Y signal in the color-converted image data. If the second identification information is also added to the Y signal, it will interfere with the first identification information.

To address this problem, the present invention as recited in independent Claim 1 includes, *inter alia*, the features of adding first identification information to a first color signal of image data, generating second identification information, and setting the second identification information in the image data. The generating comprises performing color conversion on the image data including the first identification information so that the first identification information in the color-converted image data is formed by a color-converted first color signal, and forming the second identification information by a second color signal different from the color-converted first color signal forming the first identification information in the color-converted image data. In this manner, interference between the first identification information and the second

identification information can be avoided. For example, if the first identification information is added to a first color signal (e.g., B) of the image data, the image data is color converted so that the first identification information in the color-converted image data is formed by a color-converted first color signal (e.g., B is color-converted primarily to the C signal) and the second identification information is formed by a second color signal (e.g., Y) that is different from the color-converted first color signal (C in this example).

With this overview, the specific rejections will now be addressed.

Claims 1, 3-8, 10-15, 17-19, 21-26, 28-29 and 41-43 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicant respectfully traverses this rejection. In particular, Applicant submits that the invention as claimed is adequately supported by the original written description and respectfully submits that the Examiner appears to have misread the specification.

Specifically, the Examiner asserts that “the red signal (first color) of the scanner is converted into a yellow color signal (y) which is used to print the watermark (color converted first identification information) in a thin yellow.” That is not what the specification discloses. The background discussion in the specification mentions that a method is known for adding electronic watermark information to an image using thin yellow dots, and that according to this *conventional* art, electronic watermark information previously added to an image may be disturbed when information such as a copying machine serial number is added to the image. (Page 2, lines 1-6 and 16-23). In contrast, the description of the preferred embodiments of the present invention states that the first identification information is added to the R signal, which is converted to a C signal for printing. See page 7, lines 11-13 and page 12, line 22 through page

13, line 4. Thus, Applicants submit that a red signal is not converted into a yellow signal, as asserted by the Examiner, but rather is converted to a cyan (C) signal. Since the machine number or serial number (i.e., the second identification information) is formed as electronic watermark information in thin yellow according to the preferred embodiment (see page 8, lines 17-24) the color-converted first color signal for adding the first identification information (e.g., C) is different from the second color signal for adding the second identification information (e.g., Y). Accordingly, Applicant submits that the original specification does provide an adequate written description of the present invention as claimed, and withdrawal of this rejection is requested.

Applicant notes that the claimed invention is not limited to the specific preferred embodiments and colors described in the specification, but rather that the disclosure and the discussion above are merely illustrative of the invention, the scope of which is defined by the claims.

Claims 1, 3-8, 10-15, 17-19, 21-26, 28-29, and 41-43 stand rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Without conceding the propriety of this rejection, the independent claims have been amended in view of the Examiner comments. Applicant submits that the amended claims overcome the Examiner's objections, and withdrawal of this rejection is requested.

The Examiner further rejects the claims under U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,257,119 (Funada) in view of U.S. Patent No. 5,822,660 (Wen). Applicant also traverses this rejection.

Applicant submits that the cited art, does not disclose or suggest, either alone or in combination, at least the features of (i) performing color conversion on image data including first identification information so that the first identification information in the color-converted image

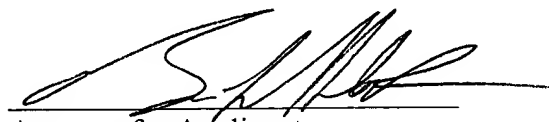
data is formed by a color-converted first color signal and (ii) forming second identification information by a second color signal different from the color-converted first color signal forming the first identification information in the color-converted image data, as recited in independent Claim 1. Accordingly, Applicant submits that independent Claim 1 is patentable over the cited art.

Independent Claims 8, 15, 19, 26, and 41 recite features similar to those mentioned above regarding Claim 1 and are believed patentable for similar reasons. The dependent claims are believed patentable for at least the same reasons as the independent claims they depend from, as well as for the additional features they recite.

In view of the foregoing, Applicant submits that this application is in condition for allowance. Favorable reconsideration, withdrawal of the outstanding rejections, and an early Notice of Allowance are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our below-listed address.

Respectfully submitted,



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